Contribution ID: **9**   Type: **Session/Workshop**

Orchestrating Data-intensive Applications on Federated Hybrid Infrastructures with the SODALITE Framework

Tuesday, 19 October 2021 16:00 (1h 30m)

Data-intensive complex applications, which include microservices, computationally intensive batch jobs, and sophisticated interaction with the external environment, demand for heterogeneous computational infrastructures that range from (public, private, and federated) Cloud to HPC and Edge. In this context, a crucial problem is to facilitate the work of DevOps teams in 1) the conception of the right operational architecture for the application, 2) its transformation into infrastructural code that automates its deployment, taking into account the peculiarities of each of the diverse infrastructures involved in this, and 2) its operation. The SODALITE framework aims at addressing this scenario. In pursuit of that objective, the SODALITE meta-model is developed on top of the TOSCA standard, which enables the interoperable description of application and infrastructure components.

The goal of this tutorial is to provide a beginner level hands-on training of the SODALITE framework. The first phase of the tutorial will provide an overview of the SODALITE framework,

focusing on its smart modeling environment (e.g., IDE and context-aware content-assistance services) and orchestration capabilities (e.g., deployment, monitoring, data management, and authentication/authorization). The second phase is a hands-on tutorial, which teaches the participants how to design a defect and error free deployment model with ease using the

SODALITE smart IDE and orchestrate the designed model on the SODALITE testbed. Participants interested in conducting the hands-on session tutorial (i.e. the IDE demonstration)

should install beforehand the SODALITE IDE (compatible with Windows, MacOS and Linux) by following the installation procedure described at:

https://github.com/SODALITE-EU/ide/blob/master/README.md

Presenters:

Jesús Gorroñogoitia, BS in Theoretical Physics from the Universidad Complutense de Madrid (UCM), with a Master in Condensed Matter and Statistics Physics by UNED. In Atos Research & Innovation (ARI), he is senior researcher and software architect in the Advance Parallel Computing Lab, specialized in HPC orchestration. Before, he was the ARI Research Line Expert on Software Engineering, working on Service Oriented Computing (SOC), Model Driven Development (MDD), Autonomous Computing, or Semantics.

Dragan Radolović graduated from University of Ljubljana in 1998 with a B.Sc. thesis titled "Image database queries based on color information". His background includes work in the

financial field (banks, financial institutions) and other software industry as a software architect and project manager. His main points of interest are Cloud architectures. Currently he works at XLAB Research as a project manager and work package leader on the SODALITE H2020

project.

Zoe Vasileiou has attended the school of Computer and Computer Engineering of the University of Thessaly, Greece from which she graduated in 2013. She also received a Master's from the same department with the title "Science and Technology of Computer Engineering, Telecommunications and Networks". Next, she worked for 5 years as a Software Engineer in Scientific Games Corporation which provides gambling products across the globe. Now, she is a

PhD student in the School of Informatics of the Aristotle University of Thessaloniki in the field of Explainable Artificial Intelligence. At the same time, she is working at CERTH research center in Greece where she mainly

has engaged in research projects related with Semantic Web technologies and cloud computing. Her research interests include Explainable AI, Knowledge Representation, and Ontology Engineering.

Indika Kumara is a post-doctoral researcher at the Jheronimus Academy of Data Science and Tilburg University, the Netherlands. He received his PhD degree from Swinburne University of Technology, Australia. His research interests include service-oriented computing, cloud computing, software performance engineering, self-adaptive systems, and Quantum computing.

Most suitable track

Delivering services and solutions

By submitting my abstract, I agree that my personal data is being stored in accordance to conference Privacy Policy

Primary authors: DEWAGE, Indika Priyantha Kumara (Tilburg University); Mr RADOLOVIĆ, Dragan (XLAB Research); Mr GORROÑOGOITIA, Jesús (ATOS); Mrs VASILEIOU, Zoe (Information Technologies Institute, Centre for Research and Technology Hellas); Mr TOKMAKOV, Kamil (High Performance Computing Center)

Presenters: DEWAGE, Indika Priyantha Kumara (Tilburg University); Mr RADOLOVIĆ, Dragan (XLAB Research); Mr GORROÑOGOITIA, Jesús (ATOS); Mrs VASILEIOU, Zoe (Information Technologies Institute, Centre for Research and Technology Hellas)

Session Classification: Delivering Services and Solutions - Workshop